Appl. No. 10/533,604 Reply to Office Action of December 14, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-17 (canceled)

Claim 18 (previously presented): A proton conductor, including: a first compound having a first structural part having a first formula:

where R1 represents a component including carbon, X represents a protoic dissociation group, and n≥1; and

a second compound having a second structural part having a second formula:

$$R3 O II R2 - N - C - H$$

where R2 and R3 represent a component including carbon or hydrogen, respectively, wherein a number of moles of the first compound is a, and the number of moles of the second compound is b, a ratio of the number of moles b to the number of moles of the protoic dissociation group (a×n) includes 10≦b/(a×n)≦30.

Claim 19 (previously presented): A proton conductor according to claim 18, wherein the second compound includes at least one of N, N-dimethyl formamide and N-methyl formamide.

Claim 20 (canceled)

Claim 21 (previously presented): A proton conductor according to claim 18, wherein the protic dissociation group is at least one of a -SO₃H group, a -COOH group, and a -OH group.

Claim 22 (withdrawn): A single ion conductor, including: a first compound having a first structural part having a first formula:

$$\frac{Z}{R1}$$

where R1 represents a component including carbon, Z represents a cationic dissociation group, and n≥1; and

a second compound having a second structural part having a second formula:

where R2 and R3 represent a component including carbon or hydrogen, respectively.

Claim 23 (withdrawn): A single ion conductor according to claim 22, wherein the second compound includes at least one of N, N-dimethyl formamide and N-methyl formamide.

Claim 24 (withdrawn): A single ion conductor according to claim 22, wherein where the number of moles of the first compound is c, and a number of moles of the second compound is b, a ratio of the number of moles b to the number of moles of the cationic dissociation group (c×n) is in a range of 10≦b/(c×n)≦30.

Claim 25 (withdrawn): A single ion conductor according to claim 22, wherein the cationic dissociation group is at least one of a -SO₃M group, a -COOM group, and a -OM group where M is selected from the group consisting of lithium, sodium, potassium, and rubidium.

Claim 26 (withdrawn): A method of manufacturing a proton conductor, the method comprising impregnating a first compound having a first structural part having a first formula

into a second compound or a solution thereof in a solvent, the second compound having a second structural part having a second formula, where the first formula and the second formula are as follows, respectfully:

$$X$$
 $+R1$
 \xrightarrow{n}

where R1 represents a component including carbon, X represents a protic dissociation group, and n is in a range of n≥1, and

$$R3 O II R2 - N - C - H$$

where R2 and R3 represent a component including carbon or hydrogen, respectively.

Claim 27 (withdrawn): A method of manufacturing a proton conductor, the method comprising mixing at least one of a first compound having a first structural part having a first formula and a second compound having a second structural part having a second formula and a third compound having a third structural part having a third formula in a solvent and evaporating the solvent, where the first formula, the second formula, and the third formula are as follows, respectfully.

where R1 represents a component including carbon, X represents a protic dissociation group, and n is in a range of n≥1;

$$+\frac{x}{R1}$$

where R1 represents a component including carbon, x represents a group capable of becoming a protic dissociation group by ion exchange, and n is in a range of $n \ge 1$; and

where R2 and R3 represent a component including carbon or hydrogen, respectively.

Claim 28 (withdrawn): A method of manufacturing a single ion conductor, the method comprising impregnating a first compound having a first structural part having a first formula into a second compound or solution thereof in a solvent, the second compound having a second structural part having a second formula, where the first formula and the second formula are as follows, respectfully:

$$\frac{Z}{+R1}$$

where R1 represents a component including carbon, Z represents a cationic dissociation group, and n is in a range of n≥1; and

$$R3 O II R2 - N - C - H$$

where R2 and R3 represent a component including carbon or hydrogen, respectively.

Claim 29 (withdrawn): A method of manufacturing a single ion conductor, the method comprising mixing at least one of a first compound having a first structural part having a first formula and a second compound having a second structural part having a second formula and a third compound having a third structural part having a third formula in a solvent and evaporating the solvent, where the first formula, the second formula and the third formula are as follows, respectfully:

$$\frac{Z}{+R1}$$

where R1 represents a component including carbon, Z represents a cationic dissociation group, and n is in a range of n≥1:

$$\frac{z}{+R1}$$

where R1 represents a component including carbon, z represents a group capable of becoming a cationic dissociation group by ion exchange, and n is in a range of n≥1; and

where R2 and R3 represent a component including carbon or hydrogen, respectively.

Claim 30 (withdrawn): An electrochemical capacitor having a capacitance between a pair of electrodes opposed with an electrolyte therebetween, wherein the electrolyte includes a first compound having a first structural part and a second compound having a second structural part having a second formula, where the first formula and the second formula are as follows, respectfully:

where R1 represents a component including carbon, X represents a protic dissociation group, and n is in a range of n≥1; and

$$R3 O II II R2 - H$$

where R2 and R3 represent a component including carbon or hydrogen, respectively.

Claim 31 (withdrawn): An electrochemical capacitor according to claim 30, wherein the second compound includes at least one of N, N-dimethyl formamide and N-methyl formamide.

Claim 32 (withdrawn): An electrochemical capacitor according to claim 30, wherein where a number of moles of the first compound is a, and a number of moles of the second compound is b, a ratio of the number of moles b to the number of moles of the protic dissociation group $(a \times n)$ is in a range of $10 \le b/(a \times n) \le 30$.

Claim 33 (withdrawn): An electrochemical capacitor according to claim 30, wherein the protic dissociation group is at least one of a -SO₃H group, a -COOH group, and a -OH group.

Claim 34 (withdrawn): An electrochemical capacitor according to claim 30, having a pseudo capacity expressed as a derived function $d(\Delta q)/d(\Delta v)$ between a magnitude of an electrical charge (Δq) and a magnitude of an electrical charge (Δv), in addition to the capacitance between the pair of electrodes.